

ZOOLOGY.—*Sinocybe*, a new genus of *colobognath* millipeds from China.¹ H. F. LOOMIS, Bureau of Plant Industry.

The milliped order Colobognatha is considered more primitive than any of the other orders of Chilognatha, as its mouthparts are of simplified form, adapted to sucking, instead of being developed into the more complicated mechanisms required for chewing foods. Parallel, but not necessarily simultaneous, evolution of structures is indicated by the fact that in this order legs 9 and 10 of the males have been modified for sexual purposes, whereas in other orders having these structures, termed "gonopods," at the anterior end of the body, legs 8 and 9 are modified. The gonopods of Colobognatha have not been changed to the extent found in the other orders, where the variations of structure offer many of the best taxonomic characters. There are other structural features in this order also which give evidence of closer association with prehistoric forms.

Geographic distribution of the order is another measure of its antiquity, for, while the members are found in all of the continents and many adjacent islands, relatively few genera and species are involved and, because of this and their diversity, these are looked upon as somewhat disconnected remnants of a much more populous fauna in past eras.

At the present time the Central American tropics and Malaysia vie for the lead in number of known species, although the United States is not far behind and has a diversity of forms surpassing all other countries.

One of the most typical of the Central American families of millipeds, although a small one, is the Platydesmidae of the present order. As the name implies, its species are very broad, with great development of the lateral carinae, and the legs are separated by broad sterna. This family is not known in the United States but is replaced by the Andrognathidae, containing some species resembling the platydesmids, in development of carinae, while others do not, being more slender, although to both forms

narrow sterna are common. The superficial resemblance of the broad forms of these two families, which have quite similar gonopods, has caused many diplopodists to recognize only a single family. There are no more fundamental differences, however, between related families than the narrow sterna of the Andrognathidae, supporting a fungiform process separating the legs, and the very wide, simple sterna of the Platydesmidae lacking any counterpart of that process.

The Malayan genus *Pseudodesmus*, long referred to the latter family, has very narrow sterna, but whether a fungiform process is present is not known, although the narrow sterna alone are sufficient grounds for removing the genus from the Platydesmidae and locating it near or in the Andrognathidae, the latter course being followed here.

The discovery, 23 years ago, of a new generic member of the Andrognathidae in the Lu Mountains, Kiangsi Province, China, provides a connecting link, both geographically and structurally, between *Pseudodesmus* and the North American *Brachycybe*. The new genus is represented by two specimens, a male and nearly mature female, collected by O. F. Cook and the writer near Kuling, not far from the site where many specimens of an extremely bizarre milliped, later made the type of a new and archaic family of the order Merocheta,² were found. The presence of *Sinocybe*, as the new genus is to be named, lends further support to the view that the Lu Mountains contain a residual but superficially known milliped fauna of great age.

Sinocybe, new genus

Type: *Sinocybe cooki*, new species, from central China.

Diagnosis.—*Sinocybe* occupies a place almost intermediately between the North American *Brachycybe* and the Malayan *Pseudodesmus*. As compared to *Pseudodesmus* the body is smaller;

² COOK, O. F., and H. F. LOOMIS. A new family of spined millipeds from central China. Journ. Washington Acad. Sci. 14 (5): 103-108. 1924.

¹ Received April 22, 1942.

relatively broader; less convex; with fewer segments; surface less strikingly sculptured, although having two transverse series of tubercles instead of one; the preanal scale is in a special excision of the last segment, rather than excluded from it as shown in Pocock's illustration of *Pseudodesmus verrucosus*.³ *Sinocybe* differs from *Brachycybe* in being much more convex; dorsal sculpture more strongly developed, especially on the anterior segments; head much flatter and thinner and with a raised margining rim on each side above the antenna; first segment strongly deflexed, thick, without expanded and projecting carinae and only slightly wider than the head.

Description.—Body close-jointed, the size and shape almost the same as the Californian *Brachycybe rosea* Murray, but the dorsal arch much higher (Fig. 1, B), with the head and anterior segments sloping or deflexed (Fig. 1, A), while in *Brachycybe* the anterior segments are horizontal.

Head turned underneath the first segment so that the vertex does not project beyond the first segment when viewed from above (Fig. 1, C), subcordate in outline when viewed from in front; in profile very thinly lenticular; raised marginal rim present above each antenna, surface pubescent along the posterior margin, elsewhere glabrous and very minutely punctate; antennae rising from the sides of the head, rather robust and compact, none of the joints notably elongate or crassate; gnathochilarium as in *Brachycybe*.

First segment facing forward, vertical to the body; rather small and thick as in *Pseudodesmus* and like it in being without produced carinae or expanded margins; surface finely and densely pubescent, with several large, elongate tubercles, but without a series of smaller tubercles as on the other segments.

Following anterior segments with lateral carinae produced forward as in *Brachycybe*, but with the posterior margin overlapped by the carinae of the next segment (Fig. 1, C); in *Pseudodesmus* the carinae are more strongly produced forward, the outer limits narrowed, subacute, whereas in *Sinocybe* they are broadly rounded, subtruncate; second segment with carinae much thicker than any others, the dorsum

strongly arched and the transverse crest beset with tubercles in a single series; segments 3 and 4 with the crest reduced but bearing a single series of tubercles; subsequent segments with two rows of tubercles, dorsum with a strongly impressed median sulcus and a less definite transverse depression between the rows of tubercles; surface above and below pubescent; lateral carinae projecting outward as in *Brachycybe*, the pore in the margin, near the posterior corner (Fig. 1, D).

Posterior segments of the same general pattern as in *Brachycybe*; the penultimate segment with the two rows of tubercles scarcely reduced in size.

Last segment not tuberculate above; pubescent on the sides only; apical margin with six small teeth; ventral margin deeply excised and completely enclosing the moderately sized and nearly semicircular preanal scale on the sides and in front (Fig. 1, E); a shallower, less apparent excision is present in *Brachycybe* but in *Pseudodesmus*, as shown in Pocock's illustration (*loc. cit.*), the scale does not indent the margin of the last segment in the least.

Legs scarcely attaining the sides of the body; coxae narrowly separated; each sternum with a small anterior median lobe projecting slightly forward between the coxae of the preceding legs; each coxa with an inflated sack arising from an apical perforation.

Gonopods rather small and compact, resembling partially atrophied legs, as in *Brachycybe*.

Sinocybe cooki, new species

A mature male and a nearly mature female collected at Kuling, Kiangsi Province, China, October 17, 1919, by O. F. Cook and H. F. Loomis. Male type in the U. S. National Museum; female paratype in Museum of Comparative Zoology, Cambridge, Mass.

Description.—Body of the type 18 mm long and 3 mm wide, composed of 55 segments; similar in outline to *Brachycybe rosea* Murray but body arch much higher.

Head bent obliquely under body; cordate in front view, thinly lenticular in profile; surface finely pubescent along posterior margin, elsewhere glabrous, shining and very minutely punctate; margins of head, above antenna sockets, with a fine raised rim reaching half way to the middle of the posterior margin; antennae

³ Ann. Mag. Nat. Hist. (ser. 5) 20: pl. 14, fig. 3, 1887.

at sides of head; moderately robust; joints 1, 3, 4, and 5 subequal, about as broad as long, slightly exceeded by joints 2 and 6, the latter somewhat broader than the other joints.

First segment almost vertical, at a right angle to the long axis of the body; size small, scarcely wider than the head; thick and without expanded or projecting margins; median surface strongly impressed longitudinally, the surface on either side of the middle with three large, crest-like tubercles; one near the front corner directed obliquely backward and outward; an-

brous above but not below; last few segments with dorsum much less pubescent between the large submedian tubercles than elsewhere.

Second segment with forwardly produced lateral carinae much thicker than the other carinae; dorsum strongly arched, transversely elevated into a broad, indefinite ridgelike prominence or crest bearing a series of 10 to 12 rounded tubercles of which the inner one on each side is the largest; next two segments crossed by decreasingly elevated tuberculate crests; segments thereafter with two series of

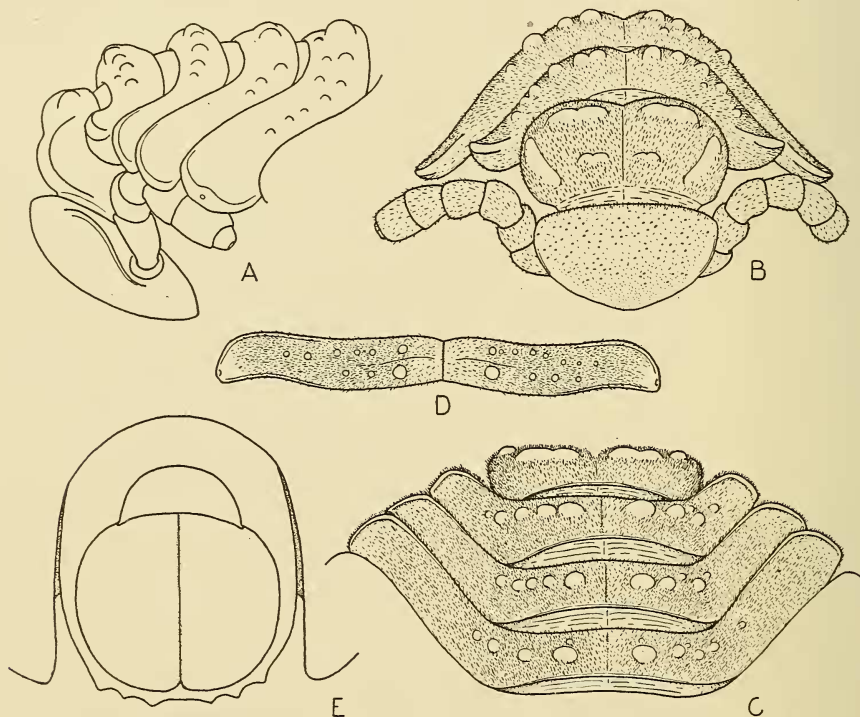


Fig. 1.—*Sinocybe cooki*, new species: A, Head and first five segments, lateral view; B, head and first three segments, anterior view; C, anterior end of body showing first four segments, dorsal view; D, segment from middle of body, dorsal view; E, last segment, anal valves and preanal scale, ventral view.

other of equal size close to the posterior margin and paralleling it; the third tubercle less than half as large as the others, transverse, slightly in front of the middle of the segment and rather close to the median impression; surface of segment with dense, subappressed pubescence but the tubercles smooth and shining; other segments with pubescence similarly disposed except that a small area near the pore is glabrous, and on the posterior segments the pubescence recedes from the lateral carinae and the last half dozen carinae are almost completely gla-

tubercles separated by a depression extending half way to the lateral margin; anterior series of tubercles extending farther laterad and containing 12 to 18 tubercles decreasing in size from the large median pair; posterior series with 6 to 8 tubercles, the median pair of both series largest; on the anterior segments the inner pair of tubercles rather close together but wide apart on the posterior segments; lateral carinae declined from the dorsum with the outer portion becoming almost horizontal; outer margin short, the anterior corner broadly

rounded, the posterior corner slightly produced caudad; pore opening outward from the margin near the posterior corner; carinae of the anterior segments overlapped behind by the carinae of the next segment; margins of the outer half of the carinae raised above the inner surface but gradually lowered after the first few segments.

Penultimate segment with lateral carinae produced straight back, widely separated; the inner margins parallel, smooth; the outer margins, and those of several preceding segments, finely serrate.

Last segment longer than broad, the dorsum longer than on any other segment; surface smooth and glabrous except on the sides which are slightly pubescent; apex broadly rounded and with six small, subapical, marginal teeth or tubercles; ventral margin with a deep, semicir-

cular excision which completely surrounds the preanal scale on the sides and in front.

Preanal scale almost a semicircle, crescentic, the posterior margin lightly emarginate, continuing the line of the margin of the last segment around the anal valves.

Valves strongly inflated, together almost hemispherical, the margins meeting in a groove.

Legs close together, the narrow sterna with anterior lobes projecting up and forward between the coxae of the preceding legs; coxae each with an inflated sack projecting from an apical perforation; tip of legs just attaining the sides of the body.

Gonopods closely resembling those of *Brachycybe*, being short, rather stout, curved forward and inward, and with easily distinguished leg-like joints.

PROCEEDINGS OF THE ACADEMY AND AFFILIATED SOCIETIES

THE ACADEMY

374TH MEETING OF THE BOARD OF MANAGERS

The 374th meeting of the Board of Managers was held in the library of the Cosmos Club on March 16, 1942. President CURTIS called the meeting to order at 8:01 P.M., with 23 persons present, as follows: H. L. CURTIS, F. D. ROSINI, H. S. RAPPLEYE, N. R. SMITH, R. J. SEEGER, F. H. H. ROBERTS, JR., F. G. BRICKWEDDE, H. B. COLLINS, JR., F. C. KRACEK, W. G. BROMBACHER, F. M. SETZLER, H. L. HALLER, A. H. CLARK, A. WETMORE, J. E. McMURTREY, JR., W. A. DAYTON, F. B. SILSBEE, E. W. PRICE, L. W. PARR, H. G. DORSEY, H. STABLER, and, by invitation, G. A. COOPER and J. R. SWALLEN.

The minutes of the 373d meeting were read and approved. President CURTIS announced the following appointments:

Committee to consider certain questions relating to the membership: H. B. COLLINS, JR. (chairman), and E. W. PRICE.

Committee to consider the petition for affiliation of the District of Columbia Society of Medical Technologists: L. W. PARR (chairman), F. H. H. ROBERTS, JR., and A. H. CLARK.

Committee to consider ways and means of increasing the income of the Academy: W. A. DAYTON (chairman), H. S. RAPPLEYE, and F. B. SILSBEE.

For the Committee on Membership, Chairman KRACEK presented nominations for 6 persons (4 resident and 2 nonresident).

Three persons, one each from Canada, Mexico, and Argentina, were considered in-

dividually and duly elected to honorary membership.

For the Committee to consider certain questions relating to membership, Chairman COLLINS presented a report recommending (a) that three members of the Committee on Membership be reappointed each year in order to increase the degree of continuity in that Committee, (b) that more honorary members from South America be considered, and (c) that the number of honorary members be limited by the present Board to 25. The Board approved these recommendations.

For the Committee to consider the petition for affiliation of the District of Columbia Society of Medical Technologists, Chairman PARR presented a report recommending that this petition be declined. The Board approved this recommendation.

For the Committee to consider ways and means of increasing the income of the Academy, Chairman DAYTON presented a report recommending (a) that the number of active resident members be increased from 450 to 600, (b) that the membership of the Academy be canvassed regarding the matter of increasing dues from \$5 to \$6 annually, (c) that a Committee be appointed to obtain patrons for the Academy, and (d) that the JOURNAL of the Academy consider the placing therein of appropriate paid advertising. The Committee also reported that 33 State Academies of Science affiliated with the American Association for the Advancement of Science were being circularized with an appropriate questionnaire. The Board acted separately on each of the foregoing recommendations, as follows: (a) It was decided